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INGREDIENTS FOR SUCCESSFUL DUTCH ELM DISEASE CONTROL



- EXPERTISE
- PERSISTENCE
- AUTHORITY



When Dutch elm disease strikes, some communities escape with little loss, while others suffer enormous, sometimes complete, depletion of their elm trees. Spending large amounts of money on Dutch elm disease control programs doesn't necessarily spell success. What does? The best formula seems to be a combination of three elements: expertise, persistence, and authority.

This was the conclusion from a survey conducted by U.S.D.A. Forest Service scientists at the Northeastern Forest Experiment Station's Delaware, Ohio, laboratory. The researchers analyzed Dutch elm disease control programs in 39 communities to find what made some succeed when others failed. From their results comes some helpful information for any community faced with the prospect of losing its elms.

Here are the three basic components of a successful Dutch elm disease control program, with an explanation of what they mean and what they can do for your community.



expertise

"If a community is to have an effective disease-control program, it must . . . make sure that it develops a program based on biological conditions."

The best way to assure that an area's biological conditions are identified and understood is to obtain the services of an expert. He or she might be an arborist, an entomologist, or a pathologist with the appropriate technical training and experience to tackle complex biological problems.

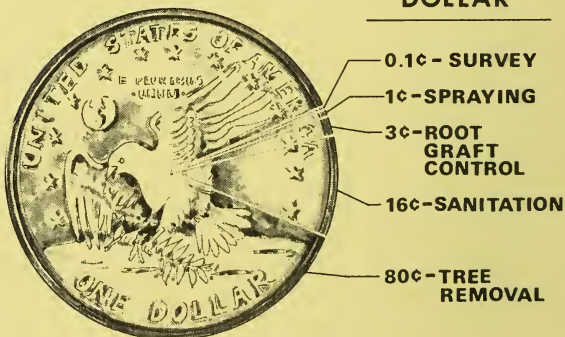
Some of the biological factors that affect a program's success are:

Spacing of elm trees. For example, a city in which elm trees are closely clumped together may need to use root-graft control as part of its control package. In places where elms are few and far between, the probability of transmitting the disease by root grafts would be small.

Mixing of shade tree species. Elm trees are often interspersed with other shade trees, such as maple, oak, or sycamore. Different mixtures of species call for different control measures, which an expert can recommend.

Doing too much against Dutch elm disease can be as wasteful as doing too little. Communities that use every possible strategy do not do any better than those who conduct a less intense effort. Good performers do a better job whatever strategy they use, if the strategy is right for their local situation.

THE DUTCH ELM DISEASE CONTROL DOLLAR



AVERAGE COST PER ELM OF JOBS COMPRISING
MUNICIPAL CONTROL PROGRAMS (1972)

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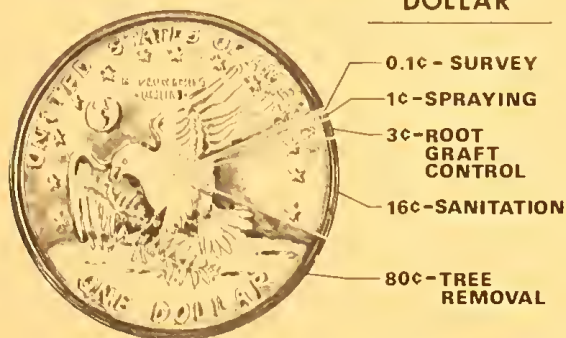
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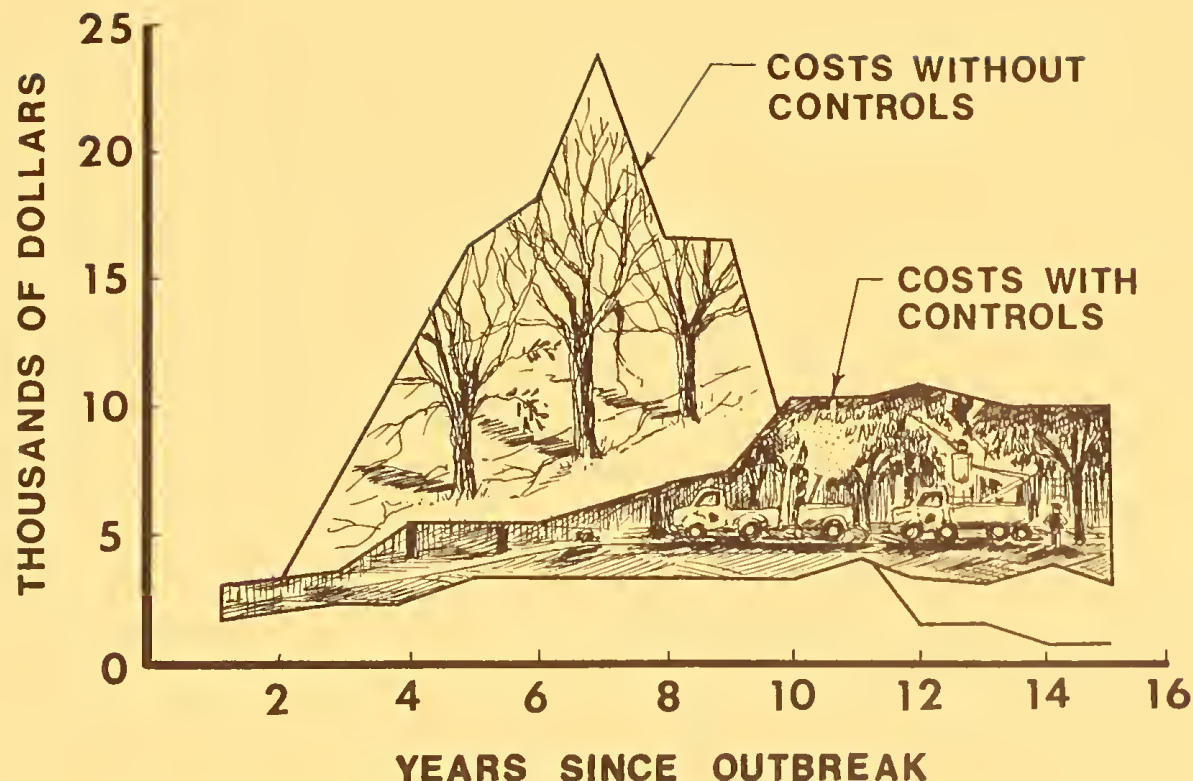
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persistence

"The communities that experienced the fewest elm losses . . . sustained their efforts over the years."

Once a control program is established it should be maintained until the disease is under control. Even a temporary slackening of control efforts, brought on, maybe, by financial stress in the community, can make it difficult or impossible to regain control of the disease situation later. Communities often find that the cost of renewing their program is much greater than sustaining it would have been. The situation often worsens until few, if any, elms remain.

Another related condition that contributes to failure in Dutch elm disease control is careless work by field crews assigned to the control program. Sometimes managers don't allow enough time to do a good job. The community must do the right thing, and do it well.

authority

" . . . no matter how good a program is, it will not succeed unless it is carried out vigorously and conscientiously under a unified authority that has the power to compel action."

In many cases this factor presents the biggest difficulty. Programs are kept from operating effectively for a variety of reasons related to community government. These range from lack of leadership in the community and a lack of concern for the situation, to a shortage of funds, to conflicts in community government or among local, influential organizations. Another problem, one that affects many communities, is the lack of authority to treat or remove diseased trees on privately owned land.

Money is often the biggest stumbling block to establishing and maintaining a good control program. Most municipalities operate on a budget basis rather than an investment basis. Because of this, they may tend to lose sight of the overall cost picture. If controlling Dutch elm disease is not a top priority, officials could take what they think is the easy way out, and decide on no control.

Looking at the cost of different options over a period of 15 years, quite a different picture emerges than might be expected. The cost of no control rises to a spectacular high during the first 7 to 10 years due to tree removal costs. At about 12 years, with only 10-15 percent of the community's elms still alive, the costs decline to a very low level.

Active control efforts slow the dramatic increase in costs, which peak and settle in 5 to 10 years. In 15 years, 55-85 percent of the elms are still alive. The highest cost for any one year in an active control program is less than half as high as the highest annual cost of no control.

In terms of a budget, it's important to note that even the costliest control program would have less

impact on the annual budget than the tree removal costs of no control.

The largest loss to communities where no control is practiced is reduction in property value due to loss of elm trees. A tree's main value is in the shade and beauty it provides, but since it's difficult to assign a dollar value to these qualities, property value losses as assessed by realtors are an appropriate gauge.

It must be remembered that these three factors work best when they work together. For success, a well-founded program must be applied conscientiously over the years. Money and community support are not effective unless they are invested in a good, sustained program. In Dutch elm disease control, it's the overall picture that counts.



CONTROLS



NO CONTROLS

For a full report on the survey findings, write for a copy of "Dutch Elm Disease Control: Performance and Cost," research paper NE-345, available from Information Services, U.S. Forest Service, 6816 Market Street, Upper Darby, Pa. 19082.